

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-40 (Canceled).

Claim 41 (Withdrawn): A process for dissolving at least one lipophilic compound in an aqueous phase, comprising:

mixing the lipophilic compound with at least one block amphiphilic copolymer, and  
mixing the mixture of the dissolved hydrophilic compound and the amphiphilic copolymer with water or an aqueous phase of a multiphase composition,

wherein the amphiphilic copolymer comprises at least one of an ionic or a nonionic hydrophilic polymer block and at least one hydrophobic polymer block wherein the hydrophobic polymer block comprises polymerized monomer units of at least one selected from the group consisting of:

styrene, derivatives thereof, 4-butylstyrene,

vinyl acetate of formula  $\text{CH}_2=\text{CH}-\text{OCOCH}_3$ , a vinyl ether of formula  $\text{CH}_2=\text{CHOR}$  in which R is a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms,

acrylonitrile,

vinyl chloride, vinylidene chloride,

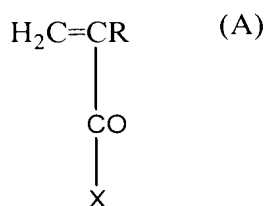
caprolactone, caprolactam,

an alkene, ethylene, propylene, butylene, butadiene,

an alkylene oxide containing at least 4 carbon atoms, an alkylene oxide containing from 4 to 6 carbon atoms,

a silicon-containing polymerizable monomer capable of forming a polysiloxane,

a hydrophobic vinyl monomer of formula (A):



in which:

R is at least one of H, -CH<sub>3</sub>, -C<sub>2</sub>H<sub>5</sub> or -C<sub>3</sub>H<sub>7</sub>,

X is at least one of:

an alkyl oxide of formula -OR' in which R' is a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 22 carbon atoms, optionally substituted with at least one of a halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a sulphonic group (-SO<sub>3</sub><sup>-</sup>); a sulphate group (-SO<sub>4</sub><sup>-</sup>); a phosphate group (-PO<sub>4</sub>H<sub>2</sub><sup>-</sup>); a hydroxyl group (-OH); a primary amine group (-NH<sub>2</sub>); a secondary amine group (-NHR<sub>1</sub>), a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>) or a quaternary amine group (-N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>) wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 22 carbon atoms, and wherein the sum of the carbon atoms of R' + R<sub>1</sub> + R<sub>2</sub> + R<sub>3</sub> does not exceed 22, or

an -NH<sub>2</sub>, -NHR' or -NR'R'' group in which R' and R'' are, independently of each other, linear or branched, saturated or unsaturated hydrocarbon radicals containing from 1 to 22 carbon atoms, wherein the total number of carbon atoms of R' + R'' does not exceed 22, wherein R' and R'' may optionally be substituted with at least one of halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a hydroxyl group (-OH); a sulphonic group (-SO<sub>3</sub><sup>-</sup>); a sulphate group (-SO<sub>4</sub><sup>-</sup>); a phosphate group (-PO<sub>4</sub>H<sub>2</sub><sup>-</sup>); a primary amine group (-NH<sub>2</sub>); a secondary amine group (-NHR<sub>1</sub>); a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>) or a quaternary amine group (-N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>); wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are, independently of each

other, a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 22 carbon atoms, wherein the sum of the carbon atoms of  $R' + R'' + R_1 + R_2 + R_3$  does not exceed 22, wherein  $R'$  and  $R''$  may optionally be perfluoroalkyl radicals having from 1 to 18 carbon atoms.

Claim 42 (Withdrawn): The process according to Claim 41, wherein the molecular weight of the block copolymer is between 1,000 and 100,000.

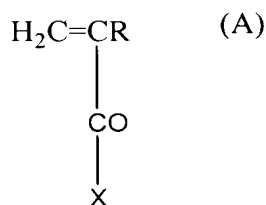
Claim 43 (Withdrawn): The process according to Claim 41, wherein the weight ratio of the ionic or nonionic hydrophilic polymer block to the hydrophobic polymer block is between 1/100 and 50/1.

Claim 44 (Withdrawn): The process according to Claim 41, wherein the weight concentration ratio between the lipophilic compound and the block amphiphilic copolymer is between 0.005 and 0.5.

Claim 45 (Withdrawn): The process according to Claim 41, wherein the hydrophobic polymer block comprises polymerized units of one or more hydrophobic monomers selected from the group consisting of methyl methacrylate, ethyl methacrylate, n-butyl (meth)acrylate, tert-butyl (meth)acrylate, cyclohexyl acrylate, isobornyl acrylate, 2-ethylhexyl acrylate, ethyl perfluorooctyl acrylate and trifluoromethyl (meth)acrylate.

Claim 46 (Withdrawn): The process according to Claim 41, wherein the amphiphilic copolymer comprises an ionic hydrophilic polymer block comprising one or more polymerized water soluble monomers or salts thereof, selected from the group consisting of

(meth)acrylic acid,  
acrylamido-2-methylpropanesulphonic acid,  
styrenesulphonic acid,  
vinylsulphonic acid,  
(meth)allylsulphonic acid,  
vinylphosphonic acid,  
maleic anhydride,  
itaconic acid,  
dimethyldiallylammonium chloride,  
quaternized dimethylaminoethyl methacrylate,  
(meth)acrylamidopropyltrimethylammonium chloride,  
methylvinylimidazolium chloride,  
a hydrophobic vinyl monomer of formula (A):



in which:

R is at least one of H, -CH<sub>3</sub>, -C<sub>2</sub>H<sub>5</sub> or -C<sub>3</sub>H<sub>7</sub>,

X is at least one of:

an alkyl oxide of formula -OR' in which R' is a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms, substituted with at least

one of a sulphonic group ( $-\text{SO}_3^-$ ); a sulphate group ( $-\text{SO}_4^-$ ); a phosphate group ( $-\text{PO}_4\text{H}_2^-$ ); or a quaternary amine group ( $-\text{N}^+\text{R}_1\text{R}_2\text{R}_3$ ), wherein  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms, wherein the sum of the number of carbon atoms of  $\text{R}' + \text{R}_1 + \text{R}_2 + \text{R}_3$  does not exceed 6, wherein  $\text{R}'$  is optionally substituted with at least one of a halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a hydroxyl group ( $-\text{OH}$ ); a primary amine group ( $-\text{NH}_2$ ); a secondary amine group ( $-\text{NHR}_1$ ); or a tertiary amine group ( $-\text{NR}_1\text{R}_2$ ); wherein  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms, and wherein the sum of the carbon atoms of  $\text{R}' + \text{R}_1 + \text{R}_2 + \text{R}_3$  does not exceed 6; or

an  $-\text{NH}_2$ ,  $-\text{NHR}'$  or  $-\text{NR}'\text{R}''$  group in which  $\text{R}'$  and  $\text{R}''$  are, independently of each other, linear or branched, saturated or unsaturated hydrocarbon radicals containing from 1 to 6 carbon atoms, wherein the total number of carbon atoms of  $\text{R}' + \text{R}''$  does not exceed 6, wherein at least one of  $\text{R}'$  or  $\text{R}''$  may optionally be substituted with at least one of a sulphonic group ( $-\text{SO}_3^-$ ); a sulphate group ( $-\text{SO}_4^-$ ); a phosphate group ( $-\text{PO}_4\text{H}_2^-$ ); or a quaternary amine group ( $-\text{N}^+\text{R}_1\text{R}_2\text{R}_3$ ), wherein  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms, wherein the sum of the number of carbon atoms of  $\text{R}' + \text{R}_1 + \text{R}_2 + \text{R}_3$  does not exceed 6, wherein the radicals  $\text{R}'$  and  $\text{R}''$  may be optionally substituted with at least one of a halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a hydroxyl group ( $-\text{OH}$ ); a primary amine group ( $-\text{NH}_2$ ); a secondary amine group ( $-\text{NHR}_1$ ); or a tertiary amine group ( $-\text{NR}_1\text{R}_2$ ); wherein  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms, wherein the sum of the carbon atoms of  $\text{R}' + \text{R}'' + \text{R}_1 + \text{R}_2 + \text{R}_3$  does not exceed 6.

Claim 47 (Withdrawn): The process according to Claim 41, wherein the amphiphilic copolymer comprises an ionic hydrophilic block comprising one or more polymerized acrylic acid monomers.

Claim 48 (Withdrawn): The process according to Claim 41, wherein the hydrophilic block is nonionic.

Claim 49 (Withdrawn): The process according to Claim 48, wherein the amphiphilic copolymer comprises a nonionic hydrophilic polymer block comprising one or more water-soluble monomers selected from the group consisting of

(meth)acrylamide,

N-vinylacetamide, N-methyl-N-vinylacetamide,

N-vinylformamide, -methyl-N-vinylformamide,

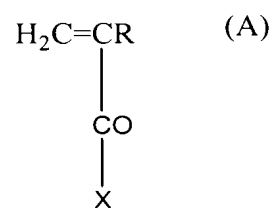
a vinyl lactam comprising a cyclic alkyl group containing from 4 to 9 carbon atoms,

N-vinylpyrrolidone, N-butyrolactam, N-vinyl-caprolactam,

a vinyl alcohol of formula  $\text{CH}_2=\text{CHOH}$ ,

a glycidyl (meth)acrylate,

a hydrophobic vinyl monomer of formula (A):



in which:

R is at least one of H,  $-\text{CH}_3$ ,  $-\text{C}_2\text{H}_5$  or  $-\text{C}_3\text{H}_7$ ,

X is at least one of:

an alkyl oxide of formula -OR' in which R' is a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms, optionally substituted with at least one of a halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a hydroxyl group (-OH); a primary amine group (-NH<sub>2</sub>); a secondary amine group (-NHR<sub>1</sub>); or a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>); wherein R<sub>1</sub> and R<sub>2</sub> are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms, and wherein the sum of the carbon atoms of R' + R<sub>1</sub> + R<sub>2</sub> does not exceed 6; or

an -NH<sub>2</sub>, -NHR' or -NR'R'' group in which R' and R'' are, independently of each other, linear or branched, saturated or unsaturated hydrocarbon radicals containing from 1 to 6 carbon atoms, wherein the total number of carbon atoms of R' + R'' does not exceed 6, wherein R' and R'' may optionally be substituted with at least one of a halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a hydroxyl group (-OH); a primary amine group (-NH<sub>2</sub>) ; a secondary amine group (-NHR<sub>1</sub>); or a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>); wherein R<sub>1</sub> and R<sub>2</sub> are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms, and wherein the sum of the carbon atoms of R' + R'' + R<sub>1</sub> + R<sub>2</sub> does not exceed 6.

Claim 50 (Withdrawn): The process according to Claim 49, wherein the nonionic hydrophilic polymer block is at least one of polyethylene oxide or polyvinyl-pyrrolidone.

Claim 51 (Withdrawn): The process according to Claim 41, wherein the hydrophobic polymer block is at least one selected from the group consisting of polystyrene, poly(tert butylstyrene), poly(methyl methacrylate), poly(ethyl acrylate), poly(butyl methacrylate), a polycaprolactone, a polycaprolactam, a polydimethylsiloxane, a poly(C<sub>3</sub>-C<sub>6</sub> alkylene oxide),

poly(aspartic acid), poly(lactic acid), poly(glycolic acid), polyleucine, polybutadiene, polyethylene, polypropylene and polybutylene.

Claim 52 (Withdrawn): The process according to Claim 41, wherein the block amphiphilic copolymer is at least one selected from the group consisting of:

polystyrene/polyoxyethylene,  
polymethyl methacrylate/polyoxyethylene,  
polybutyl methacrylate/polyoxyethylene,  
polyoxybutylene/polyoxyethylene,  
polycaprolactone/polyoxyethylene,  
polyethylene/polyoxyethylene, and  
polyoxyethylene/polyoxybutylene/polyoxyethylene.

Claim 53 (Canceled).

Claim 54 (Withdrawn): The process according to Claim 41, wherein the lipophilic compound is at least one selected from the group consisting of a vitamin, vitamin A (retinol), an ester of vitamin A, vitamin E, an ester of vitamin E, tocopheryl acetate, vitamin D, a derivative of vitamin D, vitamin F, a derivative of vitamin F, a carotene,  $\beta$ -carotene, a derivative of  $\beta$ -carotene, lycopene, and salicylic acid derivatives.

Claim 55 (Withdrawn): The process according to Claim 54, wherein the lipophilic compound is at least one salicylic acid derivative selected from the group consisting of 5-n-octanoylsalicylic, 5-n-decanoylsalicylic, 5-n-dodecanoylsalicylic, 5-n-octylsalicylic, 5-n-



heptyloxysalicylic, 4-n-heptyloxysalicylic, 5-tert-octylsalicylic, 3-tert-butyl-5-methylsalicylic, 3-tert-butyl-6-methyl-salicylic, 3,5-diisopropylsalicylic, 5-butoxysalicylic, 5-octyloxysalicylic, 5-propanoylsalicylic, 5-n-hexa-decanoylsalicylic, 5-n-oleoylsalicylic and 5-benzoylsalicylic acid, monovalent salts thereof, divalent salts thereof, and mixtures thereof.

Claim 56 (Withdrawn): The process according to Claim 53, wherein the lipophilic compound is a sunscreen selected from the group consisting of an anthranilate; a cinnamic derivative; a dibenzoylmethane derivative; a salicylic derivative; a camphor derivative; a triazine derivative; a 1,3,5-triazine derivative; a benzophenone derivative; a  $\beta,\beta'$ -diphenylacrylate derivative; a benzotriazole derivative; a benzalmalonate derivative; a benzimidazole derivative; an imidazoline; a bis-benzazolyl derivative; a p-aminobenzoic acid (PABA) derivative; a methylenebis(hydroxyphenylbenzotriazole) derivative; a screening polymer; a screening silicone; a dimer derived from  $\alpha$ -alkylstyrene; a 4,4-diarylbutadiene, and mixtures thereof.

Claim 57 (Withdrawn): The process according to Claim 56, wherein the lipophilic compound is at least one 1,3,5-triazine derivative selected from the group consisting of:

2-[(p-(tert-butylamido)anilino]-4,6-bis[(p-(2'-ethylhexyl-1'-oxycarbonyl)anilino]-1,3,5-triazine;  
2,4,6-tris[p'-(2'-ethylhexyl-1'-oxycarbonyl)anilino]-1,3,5-triazine;  
2,4-bis{[4-2-ethylhexyloxy]-2-hydroxy}phenyl}-6-(4-methoxyphenyl)-1,3,5-triazine;  
2,4,6-tris(diisobutyl 4'-aminobenzalmalonate)-s-triazine;  
and mixtures thereof.

Claim 58 (Withdrawn): The process according to Claim 56, wherein the lipophilic compound is a butylmethoxydibenzoylmethane.

Claim 59 (Withdrawn): The process according to Claim 41, wherein the lipophilic compound is at least one selected from the group consisting of

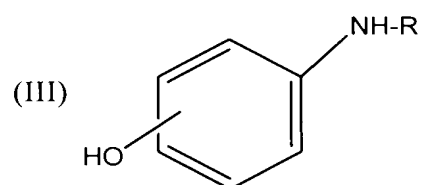
a dehydroepiandrosterone, a biological precursor of dehydroepiandrosterone, a derivative, a plant sterol, and esters thereof, with the exception of cholesterol and esters thereof;

a pentacyclic triterpene acid, ursolic acid, oleanolic acid,

a hydroxystilbene,

an isoflavonoid,

an aminophenol derivative of formula (III)



in which R is a radical corresponding to one of formula (i), (ii) or (iii)

(i)  $-\text{CO}-\text{NR}_1\text{R}_2$

(ii)  $-\text{CO}-\text{O}-\text{R}_3$

(iii)  $-\text{SO}_2-\text{R}_3$

wherein

$\text{R}_1$  is a hydrogen atom or a linear or branched, saturated or unsaturated, optionally hydroxylated  $\text{C}_{1-6}$  alkyl radical,  $\text{R}_2$  is a hydrogen atom or saturated or unsaturated, linear,

cyclic or branched, C<sub>12</sub> to C<sub>30</sub> optionally hydroxylated alkyl radical, and R<sub>3</sub> is at least one of a saturated or unsaturated, linear, branched or cyclic C<sub>12</sub> to C<sub>30</sub> alkyl radical, or a optionally hydroxylated fused polycyclic radical.

Claim 60 (Withdrawn): The process according to Claim 59, wherein the lipophilic compound comprises at least one selected from the group consisting of dehydroepiandrosterone (DHEA), DHEA sulphate, 7-hydroxy-DHEA, 7-keto-DHEA, prednisolone, prednisone, progesterone, pregnenolone, testosterone, diosgenin, hecogenin, ursolic acid, oleanolic acid, resveratrol, N-cholesteryloxycarbonyl-4-aminophenol, and an iso-flavonoid having a solubility in water at room temperature (25°C) of less than 0.01%.

Claim 61 (Currently Amended): A cosmetic composition comprising:  
at least one aqueous phase,  
at least one lipophilic compound, and  
~~a lipophilic compound solubilizing effective amount of~~ at least one block amphiphilic copolymer in which the lipophilic compound is solubilized, wherein the amphiphilic copolymer forms micelles on contact with ~~a solvent consisting essentially of~~ water;  
wherein the at least one amphiphilic copolymer comprises at least one nonionic hydrophilic polymer block and at least one hydrophobic polymer block,  
wherein the at least one amphiphilic copolymer does not comprise an ionic water-soluble hydrophilic polymer block, and  
wherein the hydrophobic polymer block comprises polymerized monomers units of at least one selected from the group consisting of:  
styrene, derivatives thereof, 4-butylstyrene,

vinyl acetate of formula  $\text{CH}_2=\text{CH}-\text{OCOCH}_3$ , a vinyl ether of formula  $\text{CH}_2=\text{CHOR}$  in which R is a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms,

acrylonitrile,

vinyl chloride, vinylidene chloride,

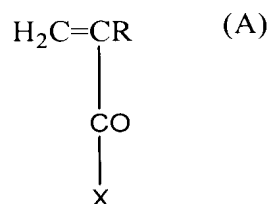
caprolactam,

an alkene, ethylene, propylene, butylene, butadiene,

an alkylene oxide containing at least 4 carbon atoms, an alkylene oxide containing from 4 to 6 carbon atoms,

a silicon-containing polymerizable monomer capable of forming a polysiloxane,

a hydrophobic vinyl monomer of formula (A):



in which:

R is at least one of H,  $-\text{CH}_3$ ,  $-\text{C}_2\text{H}_5$  or  $-\text{C}_3\text{H}_7$ ,

X is at least one of:

an alkyl oxide of formula  $-\text{OR}'$  in which R' is a linear or branched, saturated or unsaturated hydrocarbon-based radical containing from 1 to 22 carbon atoms, optionally substituted with at least one of a halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a sulphonic group ( $-\text{SO}_3^-$ ); a sulphate group ( $-\text{SO}_4^-$ ); a phosphate group ( $-\text{PO}_4\text{H}_2^-$ ); a hydroxyl group ( $-\text{OH}$ ); a primary amine group ( $-\text{NH}_2$ ); a secondary amine group ( $-\text{NHR}_1$ ), a tertiary amine group ( $-\text{NR}_1\text{R}_2$ ) or a quaternary amine group ( $-\text{N}^+\text{R}_1\text{R}_2\text{R}_3$ ) wherein  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are, independently of each other, a linear or

branched, saturated or unsaturated hydrocarbon based radical containing from 1 to 22 carbon atoms, and wherein the sum of the carbon atoms of  $R' + R_1 + R_2 + R_3$  does not exceed 22, or an  $-NH_2$ ,  $-NHR'$  or  $-NR'R''$  group in which  $R'$  and  $R''$  are, independently of each other, linear or branched, saturated or unsaturated hydrocarbon radicals containing from 1 to 22 carbon atoms, wherein the total number of carbon atoms of  $R' + R''$  does not exceed 22, wherein  $R'$  and  $R''$  may optionally be substituted with at least one of a halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a hydroxyl group ( $-OH$ ); a sulphonic group ( $-SO_3^-$ ); a sulphate group ( $-SO_4^-$ ); a phosphate group ( $-PO_4H_2^-$ ); a primary amine group ( $-NH_2$ ); a secondary amine group ( $-NHR_1$ ); a tertiary amine group ( $-NR_1R_2$ ) or a quaternary amine group ( $-N^+R_1R_2R_3$ ); wherein  $R_1$ ,  $R_2$  and  $R_3$  are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 22 carbon atoms, wherein the sum of the carbon atoms of  $R' + R'' + R_1 + R_2 + R_3$  does not exceed 22, wherein  $R'$  and  $R''$  may optionally be perfluoroalkyl radicals having from 1 to 18 carbon atoms.

Claim 62 (Previously Presented): The composition according to Claim 61, wherein the block amphiphilic copolymer is the sole solvent for the lipophilic compound in the composition.

Claim 63 (Previously Presented): The composition according to Claim 61, wherein the molecular weight of the block copolymer is between 1,000 and 100,000.

Claim 64 (Previously Presented): The composition according to Claim 61, wherein the weight ratio of the nonionic hydrophilic polymer block to the hydrophobic polymer block is between 1/100 and 50/1.

Claim 65 (Previously Presented): The composition according to Claim 61, wherein the weight concentration ratio between the lipophilic compound and the block copolymer is between 0.005 and 0.5.

Claim 66 (Previously Presented): The composition according to Claim 61, wherein the hydrophobic polymer block comprises one or more polymerized monomer units selected from the group consisting of methyl methacrylate, ethyl methacrylate, n-butyl (meth)acrylate, tert-butyl (meth)acrylate, cyclohexyl acrylate, isobornyl acrylate, 2-ethylhexyl acrylate, ethyl perfluorooctyl acrylate and trifluoromethyl (meth)acrylate.

Claim 67 (Canceled).

Claim 68 (Previously Presented): The composition according to claim 61, wherein the nonionic hydrophilic polymer block comprises one or more polymerized water-soluble monomers selected from the group consisting of

(meth)acrylamide,

N-vinylacetamide, N-methyl-N-vinylacetamide,

N-vinylformamide, N-methyl-N-vinylformamide,

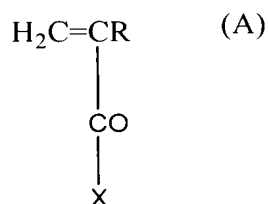
a N-vinyllactam comprising a cyclic alkyl group containing from 4 to 9 carbon atoms,

N-vinylpyrrolidone, N-butyrolactam, N-vinyl-caprolactam,

a vinyl alcohol of formula  $\text{CH}_2=\text{CHOH}$ ,

a glycidyl (meth)acrylate,

a water-soluble vinyl monomer of formula (A) below:



in which:

R is at least one of H,  $-\text{CH}_3$ ,  $-\text{C}_2\text{H}_5$  or  $-\text{C}_3\text{H}_7$ ,

X is at least one of:

an alkyl oxide of formula  $-\text{OR}'$  in which R' is a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms, optionally substituted with at least one of a halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a hydroxyl group ( $-\text{OH}$ ); a primary amine group ( $-\text{NH}_2$ ); a secondary amine group ( $-\text{NHR}_1$ ); or a tertiary amine group ( $-\text{NR}_1\text{R}_2$ ); wherein  $\text{R}_1$  and  $\text{R}_2$  are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms, and wherein the sum of the carbon atoms of  $\text{R}' + \text{R}_1 + \text{R}_2$  does not exceed 6; or

an  $-\text{NH}_2$ ,  $-\text{NHR}'$  and  $-\text{NR}'\text{R}''$  group in which R' and R'' are, independently of each other, linear or branched, saturated or unsaturated hydrocarbon radicals containing from 1 to 6 carbon atoms, wherein the total number of carbon atoms of  $\text{R}' + \text{R}''$  does not exceed 6, wherein R' and R'' may optionally be substituted with at least one of a halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a hydroxyl group ( $-\text{OH}$ ); a primary amine group ( $-\text{NH}_2$ ); a secondary amine group ( $-\text{NHR}_1$ ); and a tertiary amine group ( $-\text{NR}_1\text{R}_2$ ); wherein  $\text{R}_1$  and  $\text{R}_2$  are, independently of each other, a linear or branched, saturated

or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms, and wherein the sum of the carbon atoms of  $R' + R'' + R_1 + R_2$  does not exceed 6.

Claim 69 (Previously Presented): The composition according to Claim 61, wherein the amphiphilic copolymer comprises at least one nonionic hydrophilic polymer block selected from the group consisting of polyethylene oxide and polyvinylpyrrolidone.

Claim 70 (Previously Presented): The composition according to Claim 51, wherein the hydrophobic polymer block is at least one selected from the group consisting of polystyrene, poly(tert butylstyrene), poly(methyl methacrylate), poly(ethyl acrylate), poly(butyl methacrylate), a polycaprolactone, a polycaprolactam, a polydimethylsiloxane, a poly( $C_3$ - $C_6$  alkylene oxide), poly(aspartic acid), poly(lactic acid), poly(glycolic acid), poly(leucine), polybutadiene, polyethylene, polypropylene and polybutylene.

Claim 71 (Previously Presented): The composition according to Claim 61, wherein the block amphiphilic copolymer is at least one selected from the group consisting of:

polystyrene/polyoxyethylene,  
polyoxybutylene/polyoxyethylene,  
polyethylene/polyoxyethylene, and  
polyoxyethylene/polyoxybutylene/polyoxyethylene.

Claim 72 (Previously Presented): The composition according to Claim 61, wherein the lipophilic compound is at least one selected from the group consisting of an emollient, an anti-inflammatory agent, an antibacterial agent, an antifungal agent, an antiviral agent, an



anti-seborrhoeic agent, an antiacne agent, a keratolytic agent, an antihistamine, an anaesthetic, a cicatrizing agent, a pigmentation modifier, a tanning accelerator, an artificial tanning agent, a liporegulator, an anti-ageing agent, an anti-wrinkle agent, a refreshing agent, a vascular protector, an insect repellent, a deodorant, an antidandruff agent, an agent for preventing hair loss, an essential oil, a fragrance, a sunscreen, an antioxidant, a free-radical scavenger, a moisturizer and a vitamin.

Claim 73 (Previously Presented): The composition according to Claim 61, wherein the lipophilic compound is at least one selected from the group consisting of a vitamin, vitamin A (retinol), an ester of vitamin A, vitamin E, an ester of Vitamin E, tocopheryl acetate, vitamin D, a derivative of vitamin D, vitamin F, a derivative of vitamin F, a carotene,  $\beta$ -carotene, a derivative of  $\beta$ -carotene, lycopene, and a salicylic acid derivative.

Claim 74 (Previously Presented): The composition according to Claim 73, comprising at least one salicylic acid derivative selected from the group consisting of 5-n-octanoylsalicylic, 5-n-decanoylsalicylic, 5-n-dodecanoylsalicylic, 5-n-octylsalicylic, 5-n-heptyloxysalicylic, 4-n-heptyloxysalicylic, 5-tert-octylsalicylic, 3-tert-butyl-5-methylsalicylic, 3-tert-butyl-6-methyl-salicylic, 3,5-diisopropylsalicylic, 5-butoxysalicylic, 5-octyloxysalicylic, 5-propanoylsalicylic, 5-n-hexa-decanoylsalicylic, 5-n-oleoylsalicylic, a 5-benzoylsalicylic acid derivative, a monovalent salt thereof, divalent salt thereof, and mixtures thereof.

Claim 75 (Previously Presented): The composition according to Claim 72, comprising at least one sunscreen selected from the group consisting of an anthranilate; a cinnamic derivative; a dibenzoylmethane derivative; a salicylic derivative; a camphor

derivative; a triazine derivative; a 1,3,5-triazine derivative; a benzophenone derivative; a  $\beta,\beta'$ -diphenylacrylate derivative; a benzotriazole derivative; a benzalmalonate derivative; a benzimidazole derivative; an imidazoline; a bis-benzazolyl derivative; a p-aminobenzoic acid (PABA) derivative; a methylenebis(hydroxyphenylbenzotriazole) derivative; a screening polymer, a screening silicone; a dimer derived from  $\alpha$ -alkylstyrene; a 4,4-diarylbutadiene, and mixtures thereof.

Claim 76 (Previously Presented): The composition according to Claim 75, comprising a 1,3,5-triazine derivative selected from the group consisting of:

2-[(p-(tert-butylamido)anilino]-4,6-bis[(p-(2'-ethylhexyl-1'-oxycarbonyl)anilino]-1,3,5-triazine,  
2,4,6-tris[p'-(2'-ethylhexyl-1'-oxycarbonyl)anilino]-1,3,5-triazine,  
2,4-bis{[4-2-ethylhexyloxy]-2-hydroxy}phenyl)-6-(4-methoxyphenyl)-1,3,5-triazine,  
2,4,6-tris(diisobutyl 4'-aminobenzalmalonate)-s-triazine, and mixtures thereof.

Claim 77 (Previously Presented): The composition according to Claim 76, comprising a butylmethoxydibenzoylmethane.

Claim 78 (Previously Presented): The composition according to Claim 61, wherein the lipophilic compound is at least one selected from the group consisting of

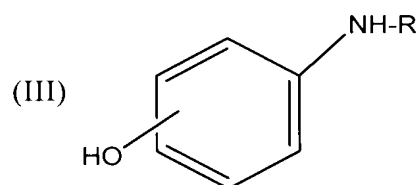
a dehydroepiandrosterone (DHEA), a biological precursor of DHEA, a derivative of DHEA, an ester of DHEA, a plant sterol, a phytosterol, a sitosterol, and esters thereof, with the exception of cholesterol and esters thereof,

a pentacyclic triterpene acid, ursolic acid, oleanolic acid,

an hydroxystilbene,

an isoflavonoids,

an aminophenol derivative of formula (III)



in which R is a radical corresponding to one of the formula (i), (ii) or (iii)

(i)  $-\text{CO}-\text{NR}_1\text{R}_2$

(ii)  $-\text{CO}-\text{O}-\text{R}_3$

(iii)  $-\text{SO}_2-\text{R}_3$

in which:

$\text{R}_1$  is a hydrogen atom or a linear or branched, saturated or unsaturated, optionally hydroxylated  $\text{C}_{1-6}$  alkyl radical,  $\text{R}_2$  is a hydrogen atom or a saturated or unsaturated, linear, cyclic or branched,  $\text{C}_{12}$  to  $\text{C}_{30}$  optionally hydroxylated alkyl radical, and  $\text{R}_3$  is at least one of a saturated or unsaturated, linear, branched or cyclic  $\text{C}_{12}$  to  $\text{C}_{30}$  alkyl radical, or an optionally hydroxylated fused polycyclic radical.

Claim 79 (Previously Presented): The composition according to Claim 78, wherein the lipophilic compound is at least one selected from the group consisting of dehydroepiandrosterone (DHEA), DHEA sulphate, 7-hydroxy-DHEA, 7-keto-DHEA,

prednisolone, prednisone, progesterone, pregnenolone, testosterone, diosgenin, hecogenin, ursolic acid, oleanolic acid, resveratrol, N-cholesteryloxycarbonyl-4-aminophenol, and an iso-flavonoid having solubility in water at room temperature (25°C) is less than 0.01%.

Claim 80 (Previously Presented): The composition according to Claim 61, further comprising one or more formulation adjuvants selected from the group consisting of a fatty substance, an organic solvent, a thickener, an opacifier, a stabilizer, an antifoam, a preserving agent, a filler, a sequestering agent, a propellant and a dye.

Claim 81 (Withdrawn): The process of Claim 41, wherein the hydrophobic polymer block comprises polymerized monomer units of the hydrophobic vinyl monomer of formula (A) wherein R' and R'' have from 1 to 18 carbon atoms.

Claim 82 (Withdrawn): The process as claimed in Claim 44, wherein the weight concentration ratio between the lipophilic compound and the block amphiphilic copolymer is between 0.005 and 0.2.

Claim 83 (Canceled).

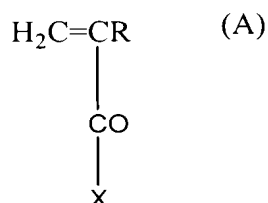
Claim 84 (Previously Presented): The composition according to Claim 65, wherein the weight concentration ratio between the lipophilic compound and the block copolymer is between 0.005 and 0.02.

Claim 85 (Previously Presented): The composition according to Claim 72, comprising at least one essential oil selected from the group consisting of eucalyptus oil, lavandin oil, lavender oil, vetiver oil, Litsea cubeba oil, lemon oil, sandalwood oil, rosemary oil, camomile oil, savory oil, nutmeg oil, cinnamon oil, hyssop oil, caraway oil, orange oil, geraniol oil and cade oil.

Claim 86 (Withdrawn): The process of Claim 41, wherein the lipophilic compound, the block amphiphilic copolymer, and water are mixed concurrently.

Claim 87 (Previously Presented): A cosmetic composition comprising:  
at least one aqueous phase comprising micelles comprising at least one lipophilic compound and at least one block amphiphilic copolymer in an amount effective to dissolve the at least one lipophilic compound,  
wherein the at least one amphiphilic copolymer comprises at least one nonionic hydrophilic polymer block and at least one hydrophobic polymer block,  
wherein the at least one amphiphilic copolymer does not comprise an ionic water-soluble hydrophilic polymer block, and  
wherein the hydrophobic polymer block comprises polymerized monomers units of at least one selected from the group consisting of:  
styrene, derivatives thereof, 4-butylstyrene,  
vinyl acetate of formula  $\text{CH}_2=\text{CH}-\text{OCOCH}_3$ , a vinyl ether of formula  $\text{CH}_2=\text{CHOR}$  in which R is a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 6 carbon atoms,  
acrylonitrile,  
vinyl chloride, vinylidene chloride,

caprolactone, caprolactam,  
an alkene, ethylene, propylene, butylene, butadiene,  
an alkylene oxide containing at least 4 carbon atoms, an alkylene oxide containing from 4 to 6 carbon atoms,  
a silicon-containing polymerizable monomer capable of forming a polysiloxane,  
a hydrophobic vinyl monomer of formula (A):



in which:

R is at least one of H, -CH<sub>3</sub>, -C<sub>2</sub>H<sub>5</sub> or -C<sub>3</sub>H<sub>7</sub>,

X is at least one of:

an alkyl oxide of formula -OR' in which R' is a linear or branched, saturated or unsaturated hydrocarbon-based radical containing from 1 to 22 carbon atoms, optionally substituted with at least one of a halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a sulphonic group (-SO<sub>3</sub><sup>-</sup>); a sulphate group (-SO<sub>4</sub><sup>-</sup>); a phosphate group (-PO<sub>4</sub>H<sub>2</sub><sup>-</sup>); a hydroxyl group (-OH); a primary amine group (-NH<sub>2</sub>); a secondary amine group (-NHR<sub>1</sub>), a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>) or a quaternary amine group (-N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>) wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon based radical containing from 1 to 22 carbon atoms, and wherein the sum of the carbon atoms of R' + R<sub>1</sub> + R<sub>2</sub> + R<sub>3</sub> does not exceed 22, or  
an -NH<sub>2</sub>, -NHR' or -NR'R'' group in which R' and R'' are, independently of each other, linear or branched, saturated or unsaturated hydrocarbon radicals containing from 1 to 22 carbon atoms, wherein the total number of carbon atoms of R' + R'' does not exceed 22,

wherein R' and R'' may optionally be substituted with at least one of a halogen atom selected from the group consisting of iodine, bromine, chlorine and fluorine; a hydroxyl group (-OH); a sulphonic group (-SO<sub>3</sub><sup>-</sup>); a sulphate group (-SO<sub>4</sub><sup>-</sup>); a phosphate group (-PO<sub>4</sub>H<sub>2</sub><sup>-</sup>); a primary amine group (-NH<sub>2</sub>); a secondary amine group (-NHR<sub>1</sub>); a tertiary amine group (-NR<sub>1</sub>R<sub>2</sub>) or a quaternary amine group (-N<sup>+</sup>R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>); wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are, independently of each other, a linear or branched, saturated or unsaturated hydrocarbon radical containing from 1 to 22 carbon atoms, wherein the sum of the carbon atoms of R' + R'' + R<sub>1</sub> + R<sub>2</sub> + R<sub>3</sub> does not exceed 22, wherein R' and R'' may optionally be perfluoroalkyl radicals having from 1 to 18 carbon atoms.

Claim 88 (Previously Presented): The composition according to claim 87, wherein the solubility of the lipophilic compound in the aqueous phase of the composition is at least 15 times greater than the solubility of the lipophilic compound in water.